

Frontier Lifeline &
Dr.K.M.Cherian Heart Foundation
in collaboration with

Birla Institute of Technology & Science
(BITS), Pilani

Offers

**Bachelor of Science
In
Physician Assistant**



Healthcare in your hands



PA Day Message

From the Chairman's Desk

Greetings

I am glad to know that October 6th is celebrated as International (National) Physician Assistant Day – This is an important day as it serves to create awareness on the significant impact Physician Assistants have made and continue to make in health care.

It was just over 20 years ago, in 1987, when I introduced the concept of Physician Assistants to our country after my return from the United States, where it had already been in practice since 1965 and had rapidly gained acceptance among the medical fraternity. During my training at the University of Alabama in Birmingham, I was very impressed with the invaluable contributions by the Physician Assistants in the management of not only routine patient procedures but in critical and highly specialized areas as well.

The PA program took off in India despite initial objections from the nursing faculty which felt threatened by the introduction of a new breed of what they perceived as “super-nurses”. However time has established a smooth symbiosis between the Physician Assistants and nurses, both of whom are indispensable to the medical

community. The Physician Assistant program has now been adopted by many other institutions in India and the number of Physician Assistants is growing in proportion to the awareness of this noble vocation.

I am happy that the role of Physician Assistants has gained better appreciation with the passage of time in India and abroad, where many Indian qualified Physician Assistants are highly placed and making significant contributions. It is also highly noteworthy that Physician Assistants have been the backbone of several research initiatives as well, to which they have contributed considerably, progressing towards a Ph.D in many instances.

I wish the Physician Assistants the very best on this special day, and wish them to persevere in their quest to improve the quality of healthcare through their own special brand of patient care.

Thank you.

Dr. K.M. Cherian MS FRACS
DSc(Hon) DSc(HC)
Chairman & CEO
Frontier Lifeline & Dr.K.M.Cherian
Heart Foundation
(Speech delivered on PA Day 2008)

About us

Frontier Lifeline and Dr. K.M. Cherian Heart Foundation at Chennai, India, is a center of excellence headed by Dr. K. M. Cherian, one of the pioneers of cardiothoracic surgery in India. This is a super-specialty hospital with infrastructure on par with the best in the world of medicine.

An exclusively dedicated academic arm of Frontier Lifeline is the International Centre for Biomedical Sciences and Technology (ICBST) for Research, Training and Applications. This was inaugurated by Dr. A. P. J. Abdul Kalam during his tenure as the President of India. The global perspective on healthcare by both these units is supported with focus on community based practice and international education.

Origin

The BS in Physician Assistant is a unique 4 year program preparing students for a career in today's rapidly changing medical environment. The Birla Institute of Technology and Science (BITS), Pilani, an internationally renowned deemed University awards this degree under a structured off-campus collaborative program.

A Physician Assistant is a healthcare professional qualified by academic and clinical training to assist physicians and surgeons in patient care and patient-oriented research. As part of their comprehensive responsibilities, PAs conduct physical exams, diagnose and treat illnesses, order and interpret tests, counsel on preventive health care and also assist in surgery.

The mission of the Physician Assistant program is to provide quality care for a diverse population in an ever-changing healthcare sector through an education based in primary care medicine with a focus on critical thinking.

This proactive and visionary concept was introduced in India by Dr. K. M. Cherian in 1987 in response to the growing number of science graduates with a keen interest in healthcare. The stringent and highly exorbitant process of securing places in medical colleges continues to leave many with potential, unfulfilled and disillusioned. However this course has been designed to foster the interest of budding healthcare providers, who will be trained and qualified to work hand in hand with the medical fraternity. Physician Assistants are being recognized as an indispensable medical task-force with their own unique contributions to the spectrum of clinical healthcare services.

Distinctive Benefits

Based on the interdisciplinary nature of health services, the program provides a comprehensive foundation in basic science, social sciences and health sciences application. PAs are trained in primary healthcare and are also found in all areas of medicine. They practice in family medicine, internal medicine, pediatrics, and obstetrics and gynecology, as well as in specialty fields such as cardiovascular surgery, orthopedics, and emergency medicine.

Students are introduced to a wide range of health issues including socio-cultural influences on health management, health care system, legal and ethical concerns, nutrition, genetics and mental health and information technology.

Research oriented work is encouraged within the course syllabus as students are able to engage in faculty-directed independent research projects both during the academic year and in the summer. Specialised laboratory training enables the students to later take up medical research based careers and help in developing new therapeutic approaches.



Hands-on clinical experience is part and parcel of this program and fosters the students with confidence to handle real-time situations, as well as offering patient interaction opportunities in an established hospital setting.

The unique prospect of enhancing one's training in the forthcoming mega medical village project by Frontier Lifeline Frontier Mediville; a state-of-the-art, fully integrated medical township catering to every aspect of healthcare for the global citizen, will be available to the students

Students will participate in a two-semester internship program to complete the degree. This provides students with the flexibility to design an individualized program of study based on interest and career goals. Foreign academic and



training collaborations with Medical Institutions and Universities in Japan, Russia, Denmark, Sweden and UK offer an opportunity to pursue specialized training and higher qualifications abroad for enhanced exposure and better employment opportunities.



Many who have successfully completed this PA Degree course have secured good placements as First Assistants to physicians or surgeons in reputable hospitals with attractive salary packages. One can also choose to enhance one's career path by simultaneously undergoing an M Phil (Phy. Asst.) at the same time. Since the PA program is well-structured, PAs can also appear for JNU and UGC PhD Fellowship exams after which a PhD in Biological and Medical Sciences can be pursued in other universities. Several such



PAs have proceeded to Indian or foreign universities to complete PhD or MD programs while others have undertaken MBA and MCI programs which have led to lucrative positions in Medical IT or Medical Drug and Biotechnology firms.



WHY SHOULD YOU BECOME A PA?

Because Pas

- Make a difference in the lives of the patients they treat
- Receive generous compensation
- Enjoy high levels of job satisfaction
- Belong to one of the fastest growing professions in the country

Dedicated Faculty

The inspiring faculty at ICBST, which also comprises of Guest Faculty (professional experts) and BITS Faculty Members, concentrate on teaching but amply contribute in shaping the personality of the student community. They hold doctoral or terminal degrees and keep extended office hours to foster a one-on-one relationship with students. ICBST is among the very few institutes that have a low student-tutor ratio. This helps the professors to challenge, inspire and motivate the students to excel not only in class but in life as well.

Eligibility

Pass in 10+2 (CBSE, Matriculation, State Board or equivalent) with Physics, Chemistry, Biology/Maths. Admission is through an entrance exam and interview.

Annual Intake

Maximum of 20 students per year



Course Details

First Semester: August - December

Second Semester: January - May

1st Year

Semester I

Mathematics I
Introduction to Computers
Biological Chemistry
General Anatomy
General Physiology
Cell Biology

Semester II

Mathematics II
Scientific Measurements
Nutrition & Dietetics
Clinical Biochemistry
Pediatrics & Geriatrics

2nd Year

Semester I

Principles of Management
Microbiology
Introduction to Psychology
Technical Report Writing
In-service Training - I

Semester II

Introduction to Surgery
Introduction to Medicine
Molecular Genetics
Data Processing
In-service Training - II

3rd Year

Semester I

Cardiology & Cardiac Surgery
Anesthesiology
Cardiac Nursing
Pharmacology & Toxicity
Biostatistics
In-service Training - III

Semester II

Principles of Emergency Medicine
Medical Instrumentation
Advances in Cardiology
Advances in Cardiac Surgery
Management Information Systems
In-service Training - IV

4th Year

Semester I

Internship - I

Semester II

Internship - II

Facilities

Computer Lab

The Centre has well equipped computing facilities with latest biomedical software. Students can access the internet for academic purposes.



Library

Besides the hospital library, the center's library has a good collection of books and journals. Other collections include CDs, videos, dissertations, thesis, and old question papers which are accessible to the students.



Hostel

Hostel accommodation is available for out-station candidates, with separate accommodation for boys and girls. Allotment will be on a first-come basis.

Evaluation and Grading

The student registers for a certain number of courses in each semester. These courses are conducted and evaluated by the faculty who teach them. Continuous assessment will be made based on class work, quizzes, tests, tutorials, lab work, assignments, seminars, projects and a comprehensive examination at the end of each semester. The student is given ample opportunities to exhibit himself/herself and be evaluated. At the end of the semester, based on the total

performance of the class, letter grades A, B, C, D or E are awarded. (A Excellent, B Good, C-Fair, D-Poor, E Exposed)

Placements

The institute has collaborations with many reputed organizations, institutions, hospitals and industries at national and international levels. Students will be placed according to their interest and merit.

**If you want to make a difference and
have a positive influence on health
care in this country, the PA profession
is waiting for you!**

Testimonial

PHYSICIAN ASSISTANTS

Biomedical Professionals Performing a Vital Role

With numerous specializations, highly sophisticated instruments and techniques for diagnosis and treatment, the modern health-care system requires a variety of medical and para-medical professionals. This has also opened up several new career options for those aspiring to contribute to the provision of modern health-care. Amongst these, beginning in the United States during the 1960s, the role of 'Physician Assistants' has assumed growing importance. The need to train similar biomedical professionals in the Indian scenario was soon recognized by the distinguished cardiac surgeon, Dr. K.M. Cherian. With his guidance, during the 1990's a comprehensive 4-year B.S. (Physician Assistant) academic programme evolved in India in collaboration with the Birla Institute of Technology & Science (BITS), Pilani.

'Physician Assistant Day', celebrated worldwide on 6th October, acknowledges the important contributions of the noble bio-medical professionals known as 'Physician Assistants'. A Physician assistant (PA) is a health-care professional with a wide range of responsibilities in the clinical setting, working closely with the supervising physician(s). These tasks include physical examination of patients, diagnosis, order and interpretation of clinical tests, assistance during surgery, pre-operative preparations and post-operative care, and counseling on preventive health care. A PA can also contribute to education, research, and administrative services. At Frontier Lifeline 'PA Week' was celebrated during Oct. 6-11, 2008 to highlight the important role of Physician Assistants in providing efficient and quality health-care to patients.

The four year BS (Physician Assistant) programme at Frontier Lifeline is an off-campus work-integrated learning programme of BITS, Pilani. A Deemed University of national and international repute, BITS, Pilani offers the curricular framework in terms of course contents and scheme of evaluation to the programme. This includes systematic classroom teaching and rigorous clinical and laboratory training at Frontier Lifeline. The students undergo intensive training by a team of faculty members from BITS, Pilani, and Frontier Lifeline, along with other experts in the respective field.

Basic and applied biomedical courses (anatomy, physiology, biochemistry, microbiology, cell biology, molecular genetics, nutrition, pharmacology, biomedical instrumentation), as also non-clinical courses that are relevant in the context of comprehensive health care system, including hospital management and administrative functions (e.g., computers and data processing, management information systems, psychology), are taught to the students. Training in mathematics and biostatistics is also imparted to empower PAs in their routine duties as well as in research projects. The clinical training includes intensive classroom sessions in medicine and surgery, as well as continuous practical training in the various clinical departments and surgical theatres. During the inter-semester vacations, students have the opportunity to gain exposure to specialty departments in other medical institutions. Similarly, the students also participate in community outreach programmes (such as health-camps) of Frontier Lifeline. The final year of the programme requires the students to take up two clinical projects (one in each semester), where he/she is supervised by a clinician to propose a research topic, work on the goals of the project, and submit a report at the end of the semester.

The evaluation scheme of BITS, Pilani involves continuous assessment of performance through four broad evaluation components: EC-1 through EC-4. The assessment includes quizzes, assignments, seminars and mini-projects as part of EC-1 and 3, while students give written examinations in the middle (EC-2) and at the end (EC-4) of the semester. This also applies to the final year clinical projects, where the progress made by the students is regularly monitored and evaluated through seminars, reports, and viva-voce. The hallmark of the BS (Physician Assistant) programme offered by BITS, Pilani is that the students enter into laboratory/clinical training from the very first semester of the first year of study! The forenoon session is dedicated to clinical training, and the afternoon session for lectures on theory courses. Working 8 am - 6 pm from Monday through Saturday, with clinical rotations in the morning and lecture sessions in the afternoon, the students in this programme participate with commendable motivation, energy and enthusiasm.

As a course instructor for biological chemistry and clinical biochemistry, I have been always impressed by their attentiveness during the lecture-sessions, as also their compliance with assignment deadlines. With remarkable maturity these young PA students responsibly balance clinical postings, theory sessions, and cheerfulness all at the same time!

With such wholesome grooming, the Physician Assistants graduate as biomedical professionals fully prepared for the myriad roles in the modern health-care sector – be it, patient care and treatment, hospital management, medical counseling, or research. Academic options post-BS (PA) include a higher degree in the same field, M.Phil. (Physician assistant), offered by BITS, Pilani as an off-campus collaborative programme), as well as other post-graduate or doctoral programmes in any of the

biomedical disciplines. At a time when the scientific fraternity is emphasizing translational research (bringing research outcomes from lab to the clinic), PAs are well-positioned to combine their knowledge of basic biomedical sciences with their four-year strong laboratory/clinical training. Patient care, a very noble service in itself, is greatly enhanced when combined with the skills of advanced technology and scientific inquiry. The recently celebrated PA Week at Frontier Lifeline was an occasion to recognize the importance of this unique biomedical profession.

Dr. P. R. Deepa
Asst. Professor (Biological Sciences),
BITS, Pilani &
Programme Coordinator, BITS, Pilani -
Frontier Lifeline Collaboration
Chennai Centre
Website: <http://www.bits-pilani.ac.in/dlp-home>

Job Oriented Unique Health Care Program - Highlights

1. Eight semester program in collaboration with BITS, Pilani.
2. Eligibility criteria – XII with (Physics, Chemistry, Maths/Biology) – 60% and above
3. Postings and Rotations in Clinical Departments along with Course Lectures and Laboratory Practicals from the first year.
4. Basic Biomedical Sciences, Clinical subjects, Technical and Management Courses, covering all the major aspects of healthcare are taught:
Anatomy, Physiology, Biochemistry, Nutrition and Dietetics, Cell Biology, Genetics, Pharmacology, Anesthesiology, Cardiology, Cardiac Surgery, Emergency Medicine, Pediatrics & Geriatrics, Microbiology, Mathematics, Biostatistics, Medical Instrumentation, Principles of Management, Introduction to Computers, Database Management and Management Information System.
5. Vacation training offered at reputed hospitals in departments like Neurology, Orthopedics, Gynecology and Obstetrics, General Medicine, Trauma Care, Nephrology etc.
6. In the final year, two clinical research projects will be given under the supervision of experts in various fields.
7. Field projects offered in the prestigious Frontier Mediville coming up at Tada
8. Opportunities to attend Continuing Medical Education (CME) programs
9. Participation in rural health camps conducted by the hospital
10. Wide spectrum of career options in Healthcare Sector (Hospitals, R & D Labs), and opportunities for higher studies in the Life Sciences in India / Abroad.

Application Details

Applications can be downloaded from the
BITS website : (<http://www.bits-pilani.ac.in/dlp-home>)

Contact

If you require further information, please contact

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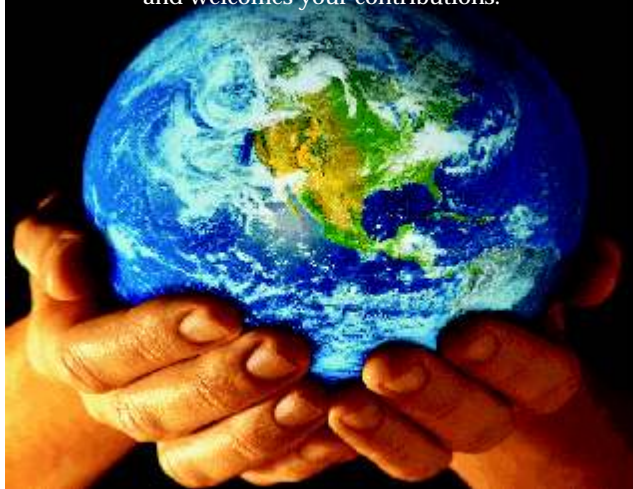
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The world awaits you.

The Physician Assistant profession is ranked as one of the fastest-growing occupations in the health care field. PAs are in great demand. The world knows you are already well-versed in the spirit-mind-and-body philosophy that pervades the healthcare profession and welcomes your contributions.



Healthcare
In your hands